

Edmonton

Evaluation Report March 2025

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1. EXECUTIVE SUMMARY

This report provides a summary of data and information collected by the City of Edmonton as part of the evaluation of traffic calming measures in the Dovercourt and Sherbrooke neighbourhoods, installed in 2022-2023.

Technical data and analysis indicate that implementing the traffic management plan has resulted in successfully achieving a balance between improving accessibility for Dovercourt and Sherbrooke neighbourhood residents while discouraging shortcutting and reducing speeding traffic. Specifically, the data allows the following conclusions:

- Dovercourt Avenue/Sherbrooke Avenue: Installing a new traffic signal at the intersection with St. Albert Trail has been effective at improving neighbourhood access while maintaining consistent local traffic volumes.
- Sherbrooke Avenue: 85th percentile speeds (50.7 km/h) have remained relatively consistent with speeds prior to the changes being implemented and remain above the 40 km/h speed limit. An additional 40 km/h speed sign has been posted to improve speed compliance.
- 122 Avenue: Installing a new traffic signal at the intersection with St. Albert Trail along with speed humps on 122 Avenue have been effective at improving neighbourhood access while reducing speeds and maintaining consistent local traffic volumes.
- 124 Avenue: The traffic diverter at the intersection with St. Albert Trail has been highly effective at reducing shortcutting through Dovercourt Avenue. Speed humps installed west of 135 Street have significantly decreased speeding.

The traffic management plan is recommended to remain in place, given the overall demonstrated success of the installed measures and their effectiveness at addressing the speeding, shortcutting and traffic volume concerns expressed by residents prior to its implementation.

2. INTRODUCTION

Safe streets are essential to community connectivity and livability. Since 2021, Dovercourt and Sherbrooke residents have expressed concerns about the access and exit from St. Albert Trail due to heavy traffic and congestion. Road changes due to construction for the <u>Yellowhead Trail Freeway</u> <u>Conversion Program</u> led residents to express concerns on 124 Avenue, Dovercourt Avenue/Sherbrooke Avenue, and 122 Avenue from St. Albert Trail. Concerns included shortcutting, speeding, and challenges exiting and entering the neighbourhoods. The City of Edmonton <u>Safe</u> <u>Mobility</u> team developed a holistic traffic management plan to help mitigate the short and long term effects of the construction on Yellowhead Trail.

Traffic Management Plan Approach

The following adaptable traffic calming measures, signage and signals were installed between September 29, 2022 and September 5, 2023.

Added Features	Location	Purpose
Traffic diverter	124 Avenue at St. Albert Trail	Prevent St. Albert Trail traffic from entering the neighbourhood at 124 Avenue.
Nine speed humps	 Three in Sherbrooke: 122 Avenue between St. Albert Trail and 129A Street Six in Dovercourt: Three on 122 Avenue between St. Albert Trail and Dovercourt Crescent Three on 124 Avenue between 135 Street and 142 Street 	Improve safety through discouraging speeding, shortcutting and heavy vehicle usage.
Speed limit (40 km/h) signage	Dovercourt Avenue west of St. Albert Trail; Sherbrooke Avenue east of St. Albert Trail; 139 Street north of 118 Avenue; 129 Street north of 118 Avenue	Encourage speed limit awareness and compliance. Align with the new signage strategy that started being implemented city-wide in 2024.
Stop signs	Four locations on 124 Avenue between 134 Street and 135 Street	Select yield signs were replaced with stop signs to encourage safer speeds and improve safety.
Two pedestrian signals converted to full traffic signals	St. Albert Trail and 122 Avenue; St. Albert Trail and Dovercourt Avenue	Improve safety and accessibility for residents.



The following map displays the installed adaptable traffic calming measures and signals.

The following map displays the speed and volume data collection sites which informed the technical data reported hereafter.



Note: Locations of data collection points are approximate.

3. ANALYSIS OF THE TRAFFIC MANAGEMENT PLAN

Speed surveys and traffic volume counts were collected before and after installation of the various traffic calming measures and signals. Data was gathered from different locations throughout the neighbourhoods to evaluate the impacts and effectiveness of the added measures themselves as well as changes in traffic patterns within the neighbourhoods. Speed surveys were completed in June 2023 and October-November 2023.

The new traffic signals were installed to provide safe and efficient access for residents and visitors entering and leaving the neighbourhoods. However, one potential risk is that a new traffic signal can increase shortcutting. The City collected before and after data on Dovercourt Avenue/Sherbrooke Avenue and on 122 Avenue, to the East and West of St. Albert Trail, to understand if there were changes in the number of vehicles using the roadway.

Dovercourt Avenue and Sherbrooke Avenue

Intersection Leg	Average Daily Traffic	Dovercourt/Sherbrooke Avenue and St. Albert Trail	
		Before Signal June 2023	After Signal October 2023
East of St. Albert	Total Vehicles	2,126	2,460
Trail*	Heavy Vehicles	182	177
West of St. Albert	Total Vehicles	3,114	3,093
Trail*	Heavy Vehicles	187	177

Traffic Signals

* Number of vehicles counted within a 24 hour period

Dovercourt/Sherbrooke Avenue is classified as a collector road designed as a main route for access in and out of the neighbourhoods.

Key findings:

- This road is operating as intended, within expected volumes for a collector road (less than 10,000 vehicles per day).
- The traffic levels on Dovercourt/Sherbrooke Avenue stayed relatively consistent before and after the signal installation, suggesting that the signal did not increase shortcutting.
- The use of heavy vehicles stayed consistent.

Speed Surveys

Additional speed surveys were completed along Sherbrooke Avenue where no additional traffic calming measures were installed, to measure overall effectiveness of the traffic management plan and any changes in traffic patterns at a neighbourhood level. Sherbrooke Avenue is classified as a collector road.

Indicator	Total Averages (Eastbound and Westbound Traffic) Sherbrooke Avenue West of 130a Street: 40 km/h limit		
	Before Changes June 2023	After Changes November 2023	
Average Speed	42.1 km/h	43.8 km/h	
85th Percentile Speed*	50.7 km/h	50.7 km/h	

*The speed at or below which 85% of drivers were observed traveling

Key findings:

• There was a small increase in the average speed; however, the overall 85th percentile speed stayed the same (50.7 km/h).

122 Avenue

Traffic Signals

Intersection Leg	Average Daily Traffic	122 Avenue and St. Albert Trail	
		Before Signal June 2023	After Signal October 2023
East of St. Albert	Total Vehicles	1,319	1,373
Trail*	Heavy Vehicles	52	53
West of St. Albert	Total Vehicles	1,126	1,153
Trail*	Heavy Vehicles	32	29

* Number of vehicles counted within a 24 hour period

Key findings:

- 122 Avenue is classified as a local road. This road is operating as expected, around 1,000 vehicles per day.
- The traffic levels on 122 Avenue stayed relatively consistent before and after the signal installation, suggesting that the interventions (signal and speed hump) did not increase shortcutting.
- The use of heavy vehicles stayed consistent.

Speed Humps

Total Averages (Eastbound and Westbound			Fraffic)	
Indicator	122 Avenue (West of 131 Street): 40 km/h limit			st of 129a Street): /h limit
	Before Speed Humps June 2023	After Speed Humps October 2023	Before Speed Humps - June 2023	After Speed Humps October 2023
Average Speed	40.0 km/h	27.3 km/h	34.7 km/h	23.5 km/h
85th Percentile Speed*	47.5 km/h	32.2 km/h	41.1 km/h	27.4 km/h

*The speed at or below which 85% of drivers were observed traveling

Key findings:

• The speed humps reduced speeds in both directions along 122 Avenue, improving safety, especially at or near the playground zones.

124 Avenue

Traffic Diverter

A traffic diverter was installed at 124 Avenue and St. Albert Trail in 2022 to address shortcutting concerns. The diverter allows drivers to exit 124 Avenue but not to enter.

Intersection Leg	Average Daily Traffic	124 Avenue and St. Albert Trail	
		Before Diverter September 2022	After Diverter June 2023
West of St. Albert	Total Vehicles	1,407	322
Trail*	Heavy Vehicles	41	3
West of 135 Street	Total Vehicles	1,853	2,069
	Heavy Vehicles	58	35

* Number of vehicles counted within a 24 hour period

Key findings:

- The diverter effectively reduced volumes on 124 Avenue west of St. Albert Trail.
- Volumes west of 135 Street remained relatively consistent.

The City has heard concerns that drivers are ignoring the diverter and travelling the wrong way. In June 2023, the City observed a small number of drivers were not in compliance with traffic rules at 124 Avenue and St. Albert Trail. In response, the City has taken additional steps to improve compliance, including working with Google to update travel directions, adding an educational sign and requesting Edmonton Police Service enforcement.

Speed Humps

Speed humps were installed along 124 Avenue west of 135 Street.

Indicator	Total Averages (Eastbound and Westbound Traffic) 124 Avenue (West of 135 Street): 40 km/h limit		
	Before Speed Humps June 2023	After Speed Humps December 2023	
Average Daily Traffic Counts*	2069	1623	
Average Daily Heavy Vehicle Counts*	35	31	
Average Speed	44.2 km/h	32.7 km/h	
85th Percentile Speed**	52.3 km/h	37.0 km/h	

* Number of vehicles counted within a 24 hour period

**The speed at or below which 85% of drivers were observed traveling

Key findings:

- Traffic speeds were greatly reduced, improving safety along the corridor.
- Traffic volumes showed some reduction, suggesting that some drivers were deterred from using the corridor due to the speed humps.

135 Street

Speed Surveys

To measure overall effectiveness of the traffic management plan and changes in traffic patterns at a neighbourhood level, additional speed surveys were completed along 135 Street, where no additional traffic calming measures were installed.

Indicator	Total Averages (Northbound and Southbound Traffic)			
indicator	135 Street (North of 122a Avenue): 40 km/h limit		135 Street (North of 118 Avenue): 40 km/h limit	
	Before Changes June 2023	After Changes October 2023	After Changes Only October 2023	
Average Daily Traffic Counts	887	852	1,234	
Average Speed	42.6 km/h	37.7 km/h	40.4 km/h	
85th Percentile Speed*	51.5 km/h	44.3 km/h	47.5 km/h	

*The speed at or below which 85% of drivers were observed traveling

Results show that this road is performing well overall and that the traffic management plan is helping to reduce speeds and shortcutting into Dovercourt. Average daily traffic volumes leaving the neighbourhood by this route (southbound) were higher than traffic entering the neighbourhood (northbound).

Key findings :

- 135 Street is classified as a local road and is operating as expected, around 1,000 vehicles per day.
- Average daily traffic counts along 135 Street north of 122a Avenue remained fairly consistent, with reduced speeding observed.
- 135 Street north of 118 Avenue is an entrance gateway into Dovercourt from an arterial road, which explains the slightly higher speeds and lower compliance at this location.
- Average speeds and speed compliance north of 118 Avenue are better than the average 40 km/h road in Edmonton, even though they are slightly higher than those north of 122a Avenue.

4. CONCLUSION

Given the success of this traffic management plan, installed measures will remain in place. Resident feedback was reviewed throughout 2022-2024, and necessary adjustments have been made.

Work Completed in 2024

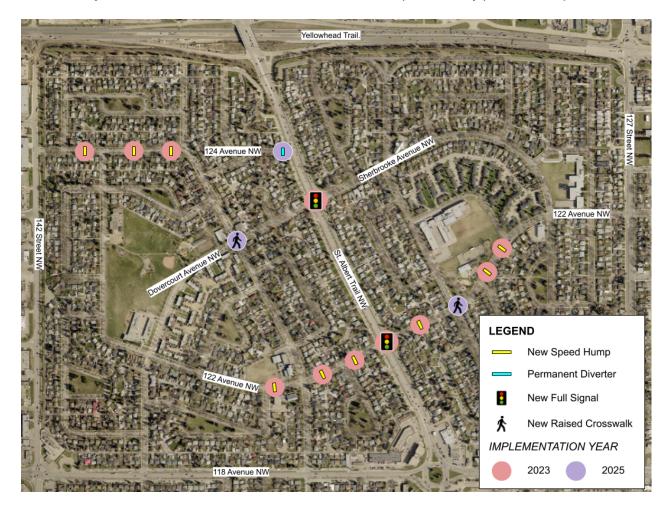
A revised signage strategy for 40 km/h roads was introduced to improve speed limit awareness and compliance. As a result:

- New "Maximum 40 km/h" signs were installed on key neighbourhood roads connecting to arterial roads, including Dovercourt Avenue, Sherbrooke Avenue, 139 Street, and 129 Street.
- Speed limit signage was not added on 135 Street and 122 Avenue due to proximity to playground zones (within 150 m), in line with best practices to avoid driver confusion.
- Advisory speed signs recommending a maximum of 15 km/h over speed humps were installed along 122 Avenue and 124 Avenue in fall/winter 2024.

Work Planned for 2025

Two additional raised crosswalks will be installed at Dovercourt Avenue and 135 Street, and 122 Avenue and 131 Street, to further support neighbourhood safety and livability. The traffic diverter at 124 Avenue and St. Albert Trail will also be converted to a permanent structure as part of this work. These measures align with the City's broader goal of improving road safety and ensuring effective traffic management in residential areas.

The following map shows the traffic calming measures installed in 2023 and planned work for 2025.



5. GLOSSARY OF TERMS

85th Percentile: The speed at or below which 85 per cent of the total drivers travel on a road segment in ideal road conditions (i.e. no traffic, no snow/ice).

Adaptable: (see Traffic Calming Measure)

Arterial Road: (see Road Classification)

Average Daily Traffic Count: The daily average number of vehicles traveling through a location over a specified period, usually 24 hours.

Collector Road: (see Road Classification)

Compliance: When behaviour follows the traffic rules of the road. (related: Violation)

Congestion: Traffic congestion is a condition on road networks that occurs as use increases and is characterized by slower speeds, longer trip times, and increased vehicle lineups. When traffic demand is large enough for the interaction between vehicles to slow the speed of the traffic, congestion begins to occur.

Diverter: (see Traffic Diverter)

Freeway: (see Road Classification)

Heavy Vehicle: Motor vehicle designed to carry large loads which have a gross vehicle mass (GVM) of more than 8,000 kg or are at least 12.5 m long. *(Source: <u>City of Edmonton Truck Routes, Dangerous</u>)*

<u>Goods and Permits</u>)

Local Road: (see Road Classification)

Permanent: (see Traffic Calming Measure)

Playground Zone: A specific area within the vicinity of schools and parks with playgrounds, marked with Playground Zone signage that require drivers to travel at lower speed limits (30km/h) during a set time period (7:30 - 21:00) daily.

Raised Crosswalk: A traffic calming measure that allows pedestrians to cross at grade with the sidewalk. Roadway crossings where the pavement is raised no higher than the level of the sidewalk spanning the entire width of the roadway, often placed at midblock crossings, providing a demarcated path of travel for pedestrians from curb to curb.

Residential Speed Limit: The default maximum speed limit on local roads in Edmonton under ideal conditions.

- As of August 6, 2021, the default speed limit changed to 40 km/h on most residential and downtown streets. Charter Bylaw 19282 reduced the citywide default speed limit from 50 km/h to 40 km/h. In alignment with the Charter Bylaw 19282, the Speed Zones Bylaw 19283 reduced the speed limit from 50 km/h to 40 km/h within a number of high pedestrian areas including Downtown and on the main street portions of Jasper Avenue and Whyte Avenue.
- Slowing down increases the driver's field of vision and gives everyone more time to react. As a result, the new 40 km/h default speed limit helps reduce crashes on our streets. Slower

speeds also increase the survival rate of a crash and help reduce unnecessary tragedies on our roads. (*Source: <u>City of Edmonton 40 km/h</u>*)

Road Classification: Categorization of roadways sorted according to type of service they provide to motor vehicles. Road classification indicates the degree of priority placed on access to adjacent land versus mobility. The classification of roadways assists in establishing road design features, land use planning policy, traffic density, mobility, safety and access requirements. A balance of all road types is needed to achieve mobility for all users.

(Source: <u>City of Edmonton Complete Streets Design Standards</u>, p. 31; <u>Alberta Transportation Highway</u> <u>Geometric Design Guide</u> Section A.2.3.3.1)

- **Freeways:** Defined in the Transportation System Bylaw, these streets are high traffic volume and speed roads with limited access and typically grade separated intersections.
- Arterial Roads: Defined in the Transportation System Bylaw, these streets carry larger volumes of traffic (people driving as well as those riding transit, walking and wheeling, cycling, and delivering goods) between areas with relatively few and controlled access points.
- **Collector Roads:** Provide neighbourhood travel between local and arterial streets with direct access to adjacent land. Public transit buses generally operate on collector streets within neighbourhoods.
- **Local Roads:** Provide direct access to adjacent lands and serve neighbourhood travel and include service roads.
- **Alleys:** Provide direct access to adjacent lands typically parallel to other classifications of streets and are typically used for access, deliveries, and waste collection. In core urban areas, some alleys are evolving into shared streets, with alley oriented development
- **Shared Streets:** These streets significantly limit motor vehicle traffic, and limit drivers to speeds that are no faster than a person can walk. Design elements like pavement material and entry features define the space and make it clear that shared streets are primarily designed for people walking, wheeling, and cycling.
- **Pedestrian Only Street:** Unlike shared streets that allow people walking, wheeling, cycling, and driving to share the space, a pedestrian only street either prohibits vehicles from using the street at all times, or at specific times.

Shortcutting: When drivers use local or collector roads in an attempt to reduce travel time instead of arterial roads to move between destinations, for example, to avoid traffic congestion. This is undesirable for traffic safety because it increases the volume and speed on local roads. **Signal:** (see Traffic Signal)

Speed Hump: A traffic calming measure with vertical deflection of 8-10 cm high intended to slow traffic speeds on low-volume, low-speed roads.

- Speed Humps are typically installed on local or collector roads without an Edmonton Transit bus route.
- Adaptable Speed Humps are rubber material and secured to the roadway with bolts.

- Permanent Speed Humps are asphalt material and paved directly onto the road surface.
- Curbside parking is allowed on Speed Humps, unless otherwise indicated with road signage.

Speed Limit: The maximum speed limit posted on signage for a roadway under ideal conditions. (Related: Residential Speed Limit)

Speed Survey: Data collection method to obtain vehicle speed and traffic volume counts. This information is collected using speed survey equipment which uses vehicle magnetic imaging technology to detect and count vehicles and their speed.

Speeding: Driving a vehicle in excess of the posted speed limit. This is undesirable from a traffic safety perspective.

Traffic Calming: The deliberate slowing of vehicle traffic, typically in residential or other lower speed areas, by using physical design (traffic calming measures) to improve safety for all road users including drivers, pedestrians and cyclists.

Traffic Calming Measure (or simply "Measure"): A physical infrastructure object that has a primary purpose of traffic calming.

- Adaptable Traffic Calming Measure: Typically constructed of materials which can be relocated by the City of Edmonton. For example, rubber speed humps, traffic calming curbs, cycle track curbs, flex posts, etc.
- **Permanent Traffic Calming Measure:** Typically constructed of concrete or asphalt which is installed for an indefinite period of time. For example, asphalt speed humps, concrete centre medians, etc.

Traffic Diverter: Physical barriers installed at intersections that restrict motor vehicle traffic in selected directions.

Traffic Management Plan: A holistic review process and plan to address neighbourhood traffic safety concerns, including speeding, pedestrian safety and shortcutting.

Traffic Signal: A set of automatically operated coloured lights, typically red, amber, and green, for controlling traffic at road junctions and crosswalks.

- **Full Signals** contain traffic signals in all directions of an intersection.
- **Half Signals** (aka Pedestrian Signals) are marked pedestrian crossings equipped with traffic signals on the major street, stop signs on the minor street, and pedestrian activated signal heads with "walk" and flashing "don't walk" indicators.

Violation: When a driver's behaviour does not follow the traffic rules of the road. (related: Compliance)